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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,810	03/12/2004	William W. Shumway	HES 2003-IP-012703U1	8358

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EXAMINER	
FIGUEROA, JOHN J	

ART UNIT	PAPER NUMBER
1712	

DATE MAILED: 06/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/799,810	SHUMWAY ET AL.	
	Examiner	Art Unit	
	John J. Figueroa	1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence addr ss --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-88* is/are pending in the application.

4a) Of the above claim(s) *42-62 and 67-88* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-41 and 63-66* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *3/21/04 & 5/24/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-41 and 63-66, drawn to a method of treating/fracturing a subterranean formation, classified in class 507, subclass 203+.

II. Claims 42-47, drawn to a method of emulsifying crude oil and an emulsion produced from thereof, classified in class 516, subclass 20+.

III. Claims 48-61, drawn to a method of making a drilling fluid composition, classified in class 507, subclass 103+.

IV. Claims 62 and 67-88, drawn to a drilling fluid composition, classified in class 507, subclass 103+.

The inventions are distinct, each from the other because of the following reasons:

2. Invention IV is related to inventions I and II as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product. See MPEP § 806.05(h). In the instant case the drilling fluid composition can instead be used in a completion operation or as a cementing composition.

3. Inventions III and IV are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make another and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the composition can be made by first providing the oleaginous composition into a well followed by adding the emulsion facilitating particles in the well to form the drilling fluid within the well under conventional drilling operation conditions.

4. Inventions I and II are directed to related processes of use. The related inventions are distinct if the inventions as claimed do not overlap in scope, i.e., are mutually exclusive; the inventions as claimed are not obvious variants; and the inventions as claimed are either not capable of use together or can have a materially different design, mode of operation, function, or effect. See MPEP § 806.05(j). In the instant case, although both process comprise using similar compositions, the claims in Group I are drawn to using the composition to fracture or treat a well, whereas the claims of Group II are drawn to using the composition to emulsify crude oil.

5. Because these inventions are independent or distinct for the reasons given above, and have acquired a separate status in the art in view of their different classification, the inventions require a different field of search (see MPEP § 808.02), restriction for examination purposes as indicated is proper.

6. During a telephone conversation with Mr. Craig Roddy on June 1, 2006 a provisional election was made with traverse to prosecute the invention of Group I,

claims 1-41 and 63-66. Affirmation of this election must be made by applicant in replying to this Office action. Claims 42-62 and 67-88 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Specification

7. The use of trademark, such as ACCOLADE™, PETROFREE®, ALCOSPERSRE®747 and ALCOQUEST®747, have been noted in this application. (*See* pages 7, 10 and 15 of the specification). Each trademark should be capitalized wherever it appears **and be accompanied by the generic terminology**.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner that might adversely affect their validity as trademarks.

8. The disclosure is objected to because, as mentioned in the immediately preceding paragraph, a trademark must be accompanied by their generic terminology. The specification does not disclose the generic description of the following trademarks ACCOLADE™, PETROFREE®, ALCOSPERSRE®747 and ALCOQUEST®747. Appropriate correction is required.

Double Patenting

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory

obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 1-13, 22-29, 33, 36-41 and 63-66 are provisionally rejected on the ground of nonstatutory double patenting over claims 1-13, 18, 20-27, 31-37 and 57-61 of copending Application No. 10/829,484 (hereinafter, 'the '484 application'). This is a provisional double patenting rejection since the conflicting claims have not yet been patented.

The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application since the referenced copending application and the instant application are claiming common subject matter, as follows: both sets of claims are drawn to a method of treating a subterranean formation using a surfactant-free emulsion

that has an oleaginous fluid and an emulsifier. In the case of the '484 application, the emulsifier recited in the claims is a polymeric emulsifier, whereas in the instant application the emulsifier is an "emulsion facilitating particle" which can be "a polymer or combination of polymers." (See claim 22 of the instant application)

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 1-9, 11-17, 19-21, 23-34, 36-41, 63 and 65-66 are rejected under 35 U.S.C. 102(b) as being anticipated by United States Patent Number 5,990,050 to Patel, hereinafter 'Patel'.

Patel discloses a drilling/working fluid, to be use in a subterranean formation, having an invert emulsion fluid that includes an oleaginous fluid (continuous phase) having an oil and an oil-soluble glycol ether that can be miscible in oil but only 10% miscible in water, a non-oleaginous fluid, and an emulsifier to stabilize the invert emulsion. (Abstract; col. 2, lines 17-42; col. 3, lines 12-21; col. 4, lines 8-24; col. 12, lines 2-65; col. 13, line 1 to col. 14, line 14) Patel discloses that the non-oleaginous fluid can be deionized water, fresh water, seawater and/or organic/inorganic brines and that it is present in an amount of from about 1 to 70% by volume of the total invert-emulsion volume. (Col. 4, lines 24-40)

Patel discloses the drilling fluid to further contain wetting agents or emulsifiers, such as crude tall oil, oxidized crude tall oil, alkyl aromatic sulfates and sulfonates; organophilic clay; an oil-soluble polymer or a polyamide resin as a viscosifier; weighting agents; fluid loss control agents; and corrosion inhibitors, such as silicates. (Col. 5, lines 1-15 and 22-63) Patel lists a series of emulsifiers (e.g. VERSACOAT®) followed by an alternate, separate list of surfactants, which can be instead used to produce or stabilize the invert-emulsion. Thus, Patel does not *require* that the invert-emulsion contain a surfactant. (Col. 5, lines 15-22; *See, e.g.,* Example 1, wherein Patel discloses an example of the emulsion containing a glycol ether, organophilic clay, VERSACOAT® emulsifier, a silicone emulsifier, lime, barite and a calcium chloride brine)

Although Patel does not specifically disclose contact angles for the various emulsion phases (claims 14-17), because the emulsion disclosed by Patel and that encompassed by the instant claims are the same, then both emulsions must inherently possess the same physical properties, such as contact angle.

Thus, the claims are anticipated by Patel.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

14. Claims 18, 22, 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patel in view of "Amphiphilic Copolymers", Langmuir 1998, 14, 5977-79, hereinafter 'Perrin'.

Patel was discussed above. Patel does not disclose the emulsifier to be a polymeric emulsifier nor does Patel disclose the particle size of the emulsifier.

Perrin teaches the use of a non-toxic, polymeric emulsifier to produce a rapid formation of a crystalline array of micrometer oil cells surrounded by a thin layer of aqueous polymer solution using a simple shear in-situ emulsification procedure. (Abstract).

Perrin also teaches the polymeric emulsifier to be a hydrophobically-modified poly(sodium acrylate) having hydrophobic alkyl chains grafted onto a negatively charged backbone and that its molecular weight of 50,000 g/mol. The amount of polymer required to stabilize the emulsion is 4% by volume and the cells produced by the emulsion have a diameter of 3μm. (Pages 5977-78)

Perrin further teaches that using the amphiphilic polymer to form the emulsion provides for a more uniform monodisperse emulsion having enhanced stability due to, *inter alia*, their exceptional resistance to film breaking. (Pages 5978-79)

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time that the invention was made, to use Perrin's amphiphilic polymer as the emulsifier in the invert-emulsion used in Patel's method of drilling/treating a subterranean formation. It would have been obvious to one skilled in the art to use said amphiphilic polymer in Patel's drilling fluid in order to incorporate Perrin's teachings and

attain a more uniform and stable emulsion and, thus, a more efficient and cost-effective method of drilling/treating a formation.

15. Claims 10 and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patel in view of "Crude Oil Emulsions: A State of the Art Review", SPE 77497, hereinafter 'Kokal'.

Patel was discussed above. Patel does not teach adding a breaker to the drilling fluid.

However, Kokal teaches that demulsification is the separation of an emulsion into its component phases to usually provide an aqueous component and an oil-phase component containing the desired hydrocarbon oil. (Page 5) Kokal further teaches that chemical demulsification ("breaking" by adding chemical demulsifiers) is the most common method of emulsion treatment. (Page 6-7)

Accordingly, it would have been obvious to a person of ordinary skill in the art, at the time that the invention was made, to include a breaker step in Patel's method of drilling/treating a subterranean formation comprising subsequently adding a chemical demulsifier to the invert-emulsion. It would have been obvious to one skilled in the art to do so to be able to effectively attain/produce crude oil, with lower amount of water contamination, as taught by Kokal.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Figueroa whose telephone number is (571) 272-8916. Examiner can normally be reached on Mon-Thurs & alt. Fri 8:00-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JJF/RAG

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